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ABSTRACT

Much research has been done on critical thinking and on moral reasoning, but little has been conducted or reported on the relationship between the two. Since these two abilities are of current concern at all levels of education and since students are supposed to develop the ability to think analytically and behave ethically, it seems that some determination should be made as to if and/or how these two abilities are related. Some researchers have attempted to integrate creative thinking skills with moral reasoning skills and have found them generally to be related. In considering the importance of both critical thinking and moral reasoning, several researchers have recommended that children can learn that ethical acts must have reasons. They have suggested a method called "Ethical Inquiry" to facilitate this learning and relationship. In a sense, it has been pointed out, "ethical reasoning" is logically valid moral reasoning. If moral education is considered character education and reasoning or cognition an important aspect of this process, then issues of character may also be issues of cognition. Implications for curriculum design and research are noted, including several curriculum models reported in the literature. (Contains 21 references.) (Author/ND)

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Critical Thinking and Moral Reasoning:

Can You Have One Without The Other?

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Abstract

The purpose of this paper is to discuss the relationship between critical thinking and moral reasoning. There has been much research on critical thinking and moral reasoning, but little has been conducted/reported on the relationship between these two abilities. Since these two abilities are of current concern at all levels of education and since students are supposed to develop the ability to think analytically and behave ethically, it seems that some determination should be made as to if and /or how these two abilities are related.

In considering the importance of both of these abilities, several researchers have recommended that children be taught to think critically about values. For example, Lipman and Sharp (1989) noted that children can learn that ethical acts must have reasons. They suggest one method called "Ethical Inquiry" to facilitate this learning and relationship. In a sense, Lipman and Sharp point out that "ethical reasoning" is logically valid moral reasoning. If one thinks of moral education as character education and that reasoning or cognition is an important aspect of this process, then issues of character may also be issues of cognition.

Implications for curriculum design and research also will be discussed.

Critical Thinking and Moral Reasoning:

Can You Have One Without the Other

Two current "hot" topics in education are critical thinking and moral reasoning. Interestingly, little research has been conducted and/or reported on the relationship between these two abilities. Since students from kindergarten through college are supposed to develop the ability to think critically and behave ethically, it would seem that some determination should be made regarding the relationship between these two abilities. The purpose of this paper is to discuss the relationship between critical thinking and moral reasoning.

Definitions

The following definitions are presented to clarify these issues. Critical thinking is defined as "that mode of thinking - about any subject, content, or problem - in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structure inherent on thinking and imposing intellectual standards upon them." (Critical Thinking, 1993, p. 7). In a similar vein, creative thinking is defined as "a cognitive activity that results in one or more novel solutions for a problem" (Mayer, 1992, p. 63). Moral reasoning is how people think about moral issues; issues about what is right or wrong (Moshman, Glover, & Bruning, 1987). Ethical reasoning is moral reasoning that is logically valid (Lipman, 1987).

Aspects of Critical and Creative Thinking

Critical thinking is receiving a lot of attention in all levels of education in the United States and elsewhere. It is beyond the scope of this paper to address all the latest research

on critical thinking. However, what follows is a discussion of several aspects of critical thinking relevant to the issue of moral reasoning.

There are several generic thinking skills that are teachable and learnable. These are (1) reasoning skills, (2) inquiry skills, (3) concept formation skills, (4) mental act/states, (5) mental acts, and (6) metacognitive acts (Lipman, 1987). Cannon and Weinstein (1986) have further delineated reasoning skills into four dimensions: (a) formal reasoning, (b) informal reasoning, (c) interpersonal reasoning, and (d) philosophical reasoning.

In general, reasoning skills are proficiencies that allows one to make valid inferences (Lipman, 1987). More specifically, formal reasoning permits one to make logical inferences without regard to subject matter. Informal reasoning requires interpretation, clarification, and evaluation of data before formal principles can be applied. Interpersonal reasoning involves reasoning in the context of other persons and in a manner that is responsible to them. Philosophical reasoning is "thinking about thinking" (Cannon & Weinstein, 1986).

Inquiry skills are the "higher level thinking skills" such as describing, explaining, and hypothesis formation. Concept-formation skills involve skills in mobilizing reasoning processes, such as identification. Mental act/states include doubting, believing, respecting, and understanding. Mental acts include surmising, remembering, choosing, comparing, and associating. Metacognitive acts is reflecting on one's own thinking (Lipman, 1987). In a sense, then, "metacognitive acts" is analogous to "philosophical reasoning".

Aspects of Moral Reasoning

It has been reported that moral reasoning is separate from other types of reasoning (Cannon & Weinstein, 1986). Cannon and Weinstein (1986) feel that this is an unreasonable

assumption based on two issues. They feel that (1) moral reasoning includes the other elements of reasoning, and (2) that moral reasoning "permeates the entire rational enterprise." (p. 33).

Much of the research on moral reasoning stems from Kohlberg's (1973) Cognitive-Development approach to moral reasoning. (See Table 1 for the stages.) As before, it is

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Insert Table 1 about here

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beyond the scope of this paper to present all the latest research on moral reasoning. However, several aspects of moral reasoning will be presented as it relates to critical thinking.

According to Kohlberg (1975a), the "maturity" of moral reasoning is not correlated highly with IQ. However, he noted that one's stage of cognitive development is important for the development of moral reasoning. Kohlberg felt that advanced moral reasoning depended upon advanced logical reasoning, which comes with continued cognitive development. Interestingly, Kohlberg reported that most people are higher in cognitive development than they are in level of moral reasoning. For example, he found that over 50% of late adolescents and young adults were capable of formal operational reasoning, but that only 10% of these people exhibited stages 5 and 6 of moral reasoning. He also found that not all stage 5 and 6 moral reasoners behaved accordingly. That is, given a specific situation, some stage 5 or 6 moral reasoners would not exhibit the moral behavior they said they would, (e.g., 15% of his sample cheated).

In addition, Kohlberg (1975b) stated that moral decisions that are based on universal principles of justice, as in the postconventional level, are better decisions because they are decisions on which moral people could agree. Although there is support for Kohlberg's levels of moral reasoning, one must, however, consider his conclusions with caution because some methodological weaknesses have been reported about his research. For example, there appears to be a western bias to stages 5 and 6 (Woolfolk, 1993). Also, there is a bias toward moral reasoning of white males, since his sample consisted of 10 to 16 year old, white males. In fact, Gilligan (1982) reported that similarly aged females respond differently to Kohlberg's moral dilemmas. She described females' moral reasoning as "morality of care" because their responses exhibited more compassion and nurturance than did males, whose decisions were based more on what is right or wrong. The dilemmas posed have also been criticized for being unrealistic (Moshman, et al., 1987). Although these are valid criticisms, Kohlberg's (1973) theory has stimulated much research and application to education.

Morals, ethics, or values may be taught well in school via the "Ethical Inquiry" method (Lipman & Sharp, 1989). This method involves individuals thinking for themselves about moral issues and that, especially, children will learn that there are reasons for ethical behavior. This method is included in Lipman's "Philosophy for Children" curricula.

Critical/Creative Thinking and Moral Reasoning

Although the relationship between critical and creative thinking and moral reasoning has not received much attention, it has been proposed that two aspects of creative thinking, namely cognitive flexibility and social awareness, may be the link between creativity and

moral reasoning (Doherty & Corsini, 1976). Cognitive flexibility is the ability to shift attention readily, and be fluent in scanning one's thoughts in order to solve problems (MacKinnon, 1962). Social awareness is similar to Kohlberg's (1975a,b) conception of role-taking, which is the capacity to respond in a mutually complementary manner. The present paper will focus on the dimension of cognitive flexibility and its relationship to moral reasoning.

Several studies (e.g., Doherty & Corsini, 1976; Tan-Willman, 1980; Tan-Willman & Gutteridge, 1981) have reported that creativity is related to moral reasoning. For example, Doherty and Corsini (1976) studied responses of 146 female, undergraduate students to four moral issues. Students' creativity was evaluated by determining fluency and uniqueness scores on the Wallach and Kogan (1965) test. Doherty and Corsini (1976) found that creativity scores were significantly and positively related to level of moral reasoning. This was especially so for high creatives. That is, their moral reasoning was at higher levels. Another interesting finding was that this relationship was independent of intelligence, as measured by the SAT. Doherty and Corsini (1976) concluded that their findings were consistent with the cognitive developmental approach to moral reasoning.

It has also been postulated that both high creative thinkers and high moral reasoners think independently and generate more divergent ideas than others (Tan-Willman, 1980). In fact, Guilford (1959) postulated that divergent thinking was an aspect of creative thinking. Tan-Willman (1980) found that preservice teachers, who were enrolled in a course designed to develop creativity, had moral reasoning scores that were significantly related to creativity measures of Fluency, Flexibility, and Originality. Moral reasoning, in this case "principled

reasoning", was measured by Rest's (1974) Defining Issues Test (DIT), while creativity was measured by Torrance's (1974) tests of creativity (TC). Interestingly, Tan-Willman (1980) found that the largest pre-posttest gains occurred on Originality, which correlated highest with the Principle (P) reasoning scores, which occurs during stage 5 or 6. The smallest pre-posttest gains were obtained in the Flexibility scores, which had the lowest correlations with P scores. However, Tan-Willman cautioned that gross generalizations could not be made from this study because a control group was not utilized. On the other hand, her results do suggest that training for creative thinking may influence moral reasoning, and perhaps the converse is also true.

Other research has found that gifted students, mean ages 16.5 to 17.9, in an accelerated program scored at the conventional level of moral reasoning, which was lower than expected (Tan-Willman & Gutteridge, 1981). In relation to creative thinking, their performance was somewhat substandard, considering that they came from middle-to upper-middle class, professional families. Thus, from these results, one should not assume that cognitively gifted students are superior in creative thinking or moral reasoning than average, middle-class adolescents. In addition, these results do not support the findings of Tan-Willman (1980) and Doherty and Corsini (1976).

Also, if critical thinking includes reasoning about what to do and what to believe, then this reasoning includes moral beliefs (Wright & La Bar, 1992). In fact, Cannon and Weinstein (1986) stipulated that moral reasoning entails critical thinking. Both "[c]ritical thinking and moral education require the analysis of issues, the synthesis of differing perspectives and bodies of information, and the evaluation of outcomes" (Weinstein, 1988, p.

1). Weinstein (1988) notes, however, that critical thinking offers a cumbersome mechanism for advancing moral reasoning because the relationship between the cognitive and the evaluative aspects of these capabilities tend to be theoretical.

There have been attempts at curriculum design to increase critical thinking skills and moral development in secondary students (e.g., Pierce, Lemke, & Smith, 1988). Pierce et al.'s (1988) curriculum program was composed of five parts: (1) a debate about intellectual issues of both high and low pertinence, (2) practice in critical thinking skills through exercises form various sources, (3) students were encouraged to use critical thinking skill categories to identify instances in which these skills were absent, (4) inclusion of value issues of both high and low pertinence, and (5) a student-directed independent learning project. Rest's (1979) DIT was used to assess level of moral reasoning and the Watson-Glaser Critical Thinking Appraisal (CTA) (1980), was used to assess critical thinking. Pierce et al. (1988) found significant gains in both moral reasoning and critical thinking skills at the end of the project. Thus, it seems that a curriculum can be implemented to increase secondary students' moral reasoning and critical thinking abilities.

Discussion

As has been mentioned previously, there have been some attempts at integrating/relating critical or creative thinking skills with moral reasoning skills (e.g., Doherty & Corsini, 1976; Tan-Willman, 1980; Tan-Willman & Gutteridge, 1981; Pierce et al., 1988). These researchers have found generally that creative or critical thinking is related to moral reasoning. In addition, Lipman and Sharp (1989) noted that the "Ethical Inquiry" method is an appropriate technique for teaching moral/ethical reasoning. As Lipman and

Sharp point out, this technique encourages children to be independent thinkers, and thus to become rational thinkers. Further, they state that matters of character/ethical behavior are frequently matters of cognition. Thus, there appears to be a relationship between cognition/thinking and moral/ethical reasoning.

In this regard, Cannon and Weinstein (1986) feel that competence in moral reasoning is at the center of what education in good cognitive reasoning is all about. They also feel that Lipman's "Philosophy for Children" program is the most effective curricula to develop these reasoning abilities.

Kohlberg's (1975a,b) "Just Community" high school was developed as a "participatory democracy" where students solved school issues through moral discussions. Kohlberg postulated that, through this democratic decision making and group discussions, thinking at higher stages would be improved, as well as moral reasoning. Thus, it would appear that moral discussions can be an effective part of a school's curriculum.

Although there is evidence to support the contention that there is a relationship between critical/creative thinking and moral reasoning, caution must be taken in generalizing from some of the studies. For example, Doherty and Corsini (1976) noted that, since their study included only 18 to 20 year old, female, undergraduate students, the generalizability of their results are limited to this type of population. Another matter of concern is the fact that Doherty and Corsini associate SAT scores with intelligence, which is inappropriate. SAT scores relate more to one's ability rather than to one's intelligence quotient.

Further, Tan-Willman (1980) noted that follow-up studies involving comparisons between experimental and control groups are needed to allow for generalizations to be made

from her study; that is, that creative thinking influences moral reasoning. Tan-Willman's, as well as Doherty and Corsini's (1976) studies suggest that a relatively high increase in creative thinking is necessary for an increase in moral reasoning. The degree of increase has yet to be determined.

With regard to other curriculum models for enhancing both critical thinking and moral reasoning, Pierce et al.'s (1988) model includes (1) an "issues" orientation, (2) some issues focusing on "intellectual conflicts", (3) some issues focusing on "value" conflicts, (4) issues described in "group" and "one-on-one" situations, and (5) the development of skills in identifying flaws in the defense of positions taken on issues. Much of what Pierce et al. propose has been incorporated in some way in Kohlberg's "Just Community" or Lipman's "Philosophy for Children" program; both of which have had substantial success in improving moral reasoning and critical thinking skills, respectively. Pierce et al.'s (1988) model is noteworthy in that it attempts to integrate both skills in one curriculum and not hope for an increase in one skill as another develops.

In conclusion, as Weinstein (1988) suggested, both critical thinking and moral education bring out the rational capabilities of children. In fact, Fenton (1976) stated that "persons who think at a higher moral level reason better and act in accordance with their judgment more frequently than less developed thinkers." (p.191). Thus, education is a source of improving both critical thinking and moral reasoning skills. Unfortunately, besides the programs mentioned previously, there have been few successful school programs reported in the literature. It would seem that, since being able to think critically and behave ethically are important initiatives in schools, further research would be conducted to come to some

determination regarding curricula to improve these skills, as well as determine the definitive relationship between critical/creative thinking and moral reasoning.

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Table 1.

Kohlberg's Stages of Moral Development

I. Preconventional level*

At this level the child is responsive to cultural rules and labels of good and bad, right or wrong, but interprets these labels either in terms of the physical or the hedonistic consequences of action (punishment, reward, exchange of favors) or in terms of the physical power of those who enunciate the rules and labels. The level is divided into the following two stages:

Stage 1: The punishment-and obedience orientation. The physical consequences of action determine its goodness or badness regardless of the human meaning or value of these consequences. Avoidance of punishment and unquestioning deference to power are valued in their own right, not in terms of respect for an underlying moral order supported by punishment and authority (the latter being stage 4).

Stage 2: The instrumental-relativist orientation. Right action consists of that which instrumentally satisfies one's needs and occasionally the needs of others. Human relations are viewed in terms like those of the market place. Elements of fairness, of reciprocity, and of equal sharing are present, but they are always interpreted in a physical pragmatic way. Reciprocity is a matter of "you scratch my back and I'll scratch yours," not of loyalty, gratitude, or justice.

II. Conventional level

At this level, maintaining the expectations of the individual's family, group, or nation is perceived as valuable in its own right, regardless of immediate and obvious consequences. The attitude is not only one of conformity to personal expectations social order, but to loyalty to it, of actively maintaining, supporting, and justifying the order, and of identifying with the persons or group involved in it. At this level, there are the following two stages:

Stage 3: The interpersonal concordance or "good boy--nice girl" orientation. Good behavior is that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is majority or 'natural' behavior. Behavior is frequently judged by intention--"he means well" becomes important for the first time. One earns approval by being "nice".

Stage 4: The "law and order' orientation. There is orientation toward authority, fixed rules, and the maintenance of the social order. Right behavior consists of doing one's duty, showing respect for authority, and maintaining the given social order for its own sake.

III. Postconventional, autonomous, or principled level.

At this level, there is a clear effort to define moral values and principles that have validity and application apart from the authority of the groups or persons holding these principles and apart from the individual's own identification with these groups. This level again has two stages:

Stage 5: The social contract, legalistic orientation, generally with utilitarian overtones. Right action tends to be defined in terms of general individual rights, and standards which have been critically examined and agreed upon by the whole society. There is a clear awareness of the relativism of personal values and opinions and a corresponding emphasis upon procedural rules for reaching consensus. Aside from what is constitutionally and democratically agreed upon, the right is a matter of personal "values" and "opinion." The result is an emphasis upon the "legal point of view," but with an emphasis upon the possibility of changing law in terms of rational considerations of social utility (rather than freezing it in terms of stage 4 "law and order"). Outside the legal realm, free agreements and contract is the binding element of obligation. This is the 'official" morality of the American government and constitution.

Stage 6: The universal-ethical-principle orientation. Right is defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency. These principles are abstract and ethical (the Golden Rule, the categorical imperative); they are not concrete moral rules like the Ten commandments. At heart, these are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons ("From Is to Ought," pp. 164-65).

* Reprinted from: Lawerence Kohlberg, (1973). The Claim to Moral Adequacy of a Highest Stage of Moral Judgment. The Journal of Philosophy, 70 (18), 631-32.